AMENDMENTS TO THE CLAIMS:

Please cancel claims 10 and 11, without prejudice or disclaimer, amend claims 1, 2, 4, and 5, and add new claims 15 and 16, as follows:

1. (Currently Amended) A processing apparatus for removing an oxide film from a surface of an object to be processed, the processing apparatus comprising:

a processing container accommodating the object to be processed therein;

an active gas species generating unit for producing active gas species;

a heater arranged outside the processing container to heat the object to be processed;

a transparent window formed in the processing container between the heater and the object to be processed, the transparent window sheltering the interior of the processing container from the outside in an airtight manner and also allowing heating energy from the heater to pass through; and

a shielding plate provided in such a way that the shielding plate can be inserted into or extracted from a gap between the object and the transparent window;

wherein, on condition that the shielding plate is ~~closed to insulate irradiation heat radiated from the transparent window to the object to be processed~~ inserted into the gap between the object and the transparent window so as to prevent a heat stored in the transparent window during a former heating process from being transferred from the transparent window to the object, the processing apparatus allows the oxide film formed on the surface of the object to react with the active gas species under unheated condition, thereby forming a product film; and subsequently,

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on condition that the shielding plate is extracted from the gap between the object and the transparent window so as to apply irradiation heat irradiated from the heater to the product film through the transparent window, the processing apparatus ~~opens the shielding plate so as to apply irradiation heat irradiated from the heater to the product film through the transparent window and further heats~~ allows to heat the product film to a predetermined temperature for vaporization, thereby removing the product film.

2. (Currently Amended) A processing apparatus for removing an oxide film from a surface of an object to be processed, the processing apparatus comprising:

a first processing chamber having an active gas species generating unit for producing active gas species and also allowing the oxide film formed on the surface of the object to react with the active gas species under a condition of low temperature, thereby forming a product film;

a second processing chamber having a heater for heating the object to be processed and allowing the heater to heat the product film formed on the surface of the object to a predetermined temperature for vaporization, thereby removing the product film formed in the first processing chamber; [and]

a third processing chamber having a cooler for cooling the object to be processed; and

a transporter for transporting the object on which the product film is formed in the first processing chamber between the first processing chamber and the second processing chamber.

3. (Original) A processing apparatus as claimed in claim 1 or 2, wherein the active gas species are active gas species of NF_3 gas.

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4. (Currently Amended) A processing apparatus as claimed in Claim 1, wherein the shielding plate is provided with a cooler for cooling the shielding plate itself.

5. (Currently Amended) A processing apparatus as claimed in Claim 2, wherein the transporter is arranged in a transfer chamber connected to the first processing chamber, [and] the second processing chamber, and the third processing chamber and also filled up with a non-reactive atmosphere inside.

6. (Original) A processing apparatus as claimed in Claim 1 or 2, wherein the active gas species generating unit includes:

a plasma generating tube having a plasma generating part;

a plasma gas introducing part for supplying both N_2 gas and H_2 gas into the plasma generating tube; and

a NF_3 gas supplying part for adding NF_3 gas to the active gas species flowing down from an interior of the plasma generating tube.

7. (Original) A processing apparatus as claimed in Claim 6, wherein

the plasma generating part comprises a microwave generating source for generating microwaves and a waveguide for introducing the so-generated microwaves into the plasma generating tube.

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8. (Withdrawn) A processing method of removing an oxide film from a surface of an object to be processed while using a processing apparatus which includes a processing container accommodating the object to be processed therein, a heater arranged outside the processing container to heat the object to be processed, a transparent window formed in the processing container between the heater and the object to be processed, and a shielding plate provided in such a way that the shielding plate can be inserted into or extracted from a gap between the object and the transparent window, the processing method comprising the steps of:

allowing the oxide film formed on the surface of the object to react with active gas species under a condition of low temperature on condition that the shielding plate is closed to insulate irradiation heat irradiated from the transparent window, thereby forming a product film; and subsequently,

opening the shielding plate and applying irradiation heat irradiated from the heater to the product film through the transparent window to heat the product film to a predetermined temperature for vaporization, thereby removing the product film.

9. (Withdrawn) A processing method of removing an oxide film from a surface of an object to be processed, the processing apparatus comprising:

allowing the oxide film formed on the surface of the object to react with active gas species under a condition of low temperature in a first processing chamber, thereby forming a product film;

transporting the object having the product film formed thereon from the first processing chamber to a second processing chamber; and

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heating the product film formed on the surface of the object in the second processing chamber, to a predetermined temperature for vaporization, thereby removing the product film.

10-11. (Canceled)

12. (Previously Presented) A processing apparatus according to claim 1, wherein the heater is actuated after finishing the step of forming the product film.

13. (Previously Presented) A processing apparatus according to claim 1, further comprising:

a shaft connected with the shielding plate;

a driver arranged outside the processing container for driving the shaft; and

a seal for airtight sealing between the shaft and a wall of the processing container;

wherein the shielding plate is inserted into or extracted from a gap between the object and the transparent window by actuating the driver.

14. (Withdrawn) A processing method according to claim 8, wherein the heater is actuated after finishing the step of forming the product.

15. (New) A processing apparatus for removing an oxide film from a surface of an object to be processed, the processing apparatus comprising:

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a first processing chamber having an active gas species generating unit for producing active gas species and also allowing the oxide film formed on the surface of the object to react with the active gas species under a condition of low temperature, thereby forming a product film;

a second processing chamber having a heater for heating the object to be processed and allowing the heater to heat product film formed on the surface of the object to a predetermined temperature for vaporization, thereby removing the product film formed in the first processing chamber;

a load lock chamber for transferring the object into or from the apparatus; and

a transporter for transporting the object on which the product film is formed in the first processing chamber between the first processing chamber and the second processing chamber.

16. (New) A processing apparatus as claimed in claim 15, wherein the transporter is arranged in a transfer chamber connected to the first processing chamber, the second processing chamber and the load lock chamber, and also filled up with non-reactive atmosphere inside.

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